UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,199	10/28/2003	Andrew Valencia	062891.1179	4522

5073   7590   07/21/2005

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EXAMINER
NG, CHRISTINE Y

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/695,199	VALENCIA, ANDREW
	Examiner	Art Unit	
	Christine Ng	2663	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _01 March 2005_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-6, 9-18 and 20-30_ is/are rejected.

7) ☒ Claim(s) _7, 8 and 19_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _28 October 2003_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claims 14, 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

       Claim 14 recites the limitation "the predetermined size" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

       Claim 29 recites the limitation "the predetermined size" in line 2. There is insufficient antecedent basis for this limitation in the claim.

       Claim 30 recites the limitation "the predetermined size" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-6, 9-18 and 20-30 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,891,832 to Chien et al.

Referring to claims 1, 11 and 16, Chien et al disclose a device (Figure 5, network device) for processing packets in a network. Refer to Column 12, lines 21-51. The device comprises:

A receiver (Figure 5, interface 68) operable to receive (Figure 2, step 202) a packet flow. The network device receives a packet flow of real-time and non real-time data. Refer to Column 5, lines 53-57.

A detector (Figure 5, CPU 62) operable to determine (Figure 2, step 204) if the packet flow includes a pause. The packet flow is "paused" when no real-time data is being received.

A processor (Figure 5, processor 63) operable to adjust (Figure 2, steps 206-222) fragmentation of packets in the packet flow according to whether the packet flow includes the pause. If the packet flow contains no real-time data for a predetermined period of time T, fragmentation is disabled; otherwise, fragmentation is enabled. Refer to Column 5, line 62 to Column 6, line 50.

Referring to claim 2, Chien et al disclose that the processor will not perform fragmentation of the packet flow in response to the packet flow including the pause. If the packet flow contains no real-time data for a predetermined period of time T, fragmentation is disabled. Refer to Column 5, lines 38-41.

Referring to claims 3, 12, 17 and 27, Chien et al disclose that the processor performs fragmentation of the packet flow in response to the packet flow not including the pause. If the packet flow contains real-time data, fragmentation is enabled. Refer to Column 5, lines 41-43.

Referring to claims 4, 13, 18 and 28, Chien et al disclose that the processor fragments those packets of the packet flow that exceed a predetermined local state size (MTU). Each network device implements fragmentation for any traffic that exceeds the maximum allowable fragmentation size. Refer to Column 3, lines 10-19.

Referring to claims 5, 15 and 30, Chien et al disclose that the predetermined state size is associated with a different packet flow. In another embodiment of the invention shown in Figure 4, Chien et al disclose "that the number of fragments which a packet may be fragmented into (on a particular link) is determined by the fragment size or FRAG_SIZE value associated with that link" (Column 8, line 66 to Column 9, line 2).

Referring to claim 6, Chien et al disclose that the receiver receives a plurality of packet flows, the detector is operable to determine if each of the packet flows includes a pause, and the processor is operable to adjust fragmentation of each of the plurality of packet flows according to whether any of the packet flows includes the pause. In all embodiments shown in Figures 2-4, Chien et al disclose that fragmentation is based on the amount of real-time and non real-time data in each individual packet flow, on a link-by-link basis.

Referring to claim 9, Chien et al disclose that a packet of the packet flow indicates whether the packet flow includes the pause. In another embodiment of the invention shown in Figure 3, client 191 provides indication of the pause through an external signal such as an off-hook signal from a telephone or a real-time voice/video bandwidth reservation signal, which is in the form of a packet. Refer to Column 7, lines 21-30.

Referring to claims 10 and 20, Chien et al disclose that the detector is operable

to determine whether the packet flow includes the pause in response to a receipt

frequency of packets in the packet flow. If "during a predetermined time interval T, no

real-time traffic has been transported on a selected link, then fragmentation may be

disabled on that link" (Column 5, lines 38-41).

Referring to claims 14 and 29, Chien et al disclose that the predetermined size is

associated with a state characteristic of the packet flow. In another embodiment of the

invention shown in Figure 4, Chien et al disclose that the fragment size is based on the

amount of non real-time data in a packet flow. Every time the network device receives a

non real-time packet of a particular packet flow, the amount or degree of fragmentation

used on that particular link is reduced. Refer to Column 10, lines 32-35.

Referring to claim 21, Chien et al discloses a system for processing packets in a

network, comprising:

A sender (Figure 1B, client 191) operable place information in packets of a

packet flow, the sender operable to provide an indication as to whether the packet flow

includes a pause. Client 191 provides indication of the pause through an external signal

such as an off-hook signal from a telephone or a real-time voice/video bandwidth

reservation signal. Refer to Column 2, lines 7-17 and Column 7, lines 21-30. Refer

also to the rejection of claims 1, 11 and 16.

A linking device (Figure 1B, THD's 182-186) operable to receive the packet flow

from the sender, the linking device operable to adjust fragmentation of packets in the

packet flow according to whether the packet flow includes the pause. Refer to Column

2, lines 7-17. Refer also to the rejection of claims 1, 11 and 16.

A receiver (Figure 1B, host 193) operable to receive the packet flow from the

linking device. Refer to Column 2, lines 7-17. Refer also to the rejection of claims 1, 11

and 16.

Referring to claim 22, Chien et al disclose that the sender is operable to identify

the pause in the information. Client 191 provides indication of the pause through an

external signal such as an off-hook signal from a telephone or a real-time voice/video

bandwidth reservation signal; thereby controlling whether fragmentation will be enabled

or disabled. Refer to Column 7, lines 21-30.

Referring to claim 23, Chien et al disclose that the sender is operable to classify

the pause identified in the information. Client 191 provides indication of the pause

through an external signal. The pause may be classified as being from an off-hook

signal from a telephone, an RSVP reservation signal, an ISDN connect message, a

real-time voice/video bandwidth reservation signal, etc. Refer to Column 7, lines 21-30.

Referring to claim 24, Chien et al disclose that the pause is classified according

to whether one or more predefined limits are exceeded. Client 191 provides indication

of the pause through an external signal. The pause may be classified as being from an

off-hook signal from a telephone, an RSVP reservation signal, an ISDN connect

message, a real-time voice/video bandwidth reservation signal, etc. Each signal may

be sent depending on different limits; a off-hook signal from a telephone may be sent

when a limit of time has be used up. Refer to Column 7, lines 21-30.

Referring to claim 25, Chien et al disclose that the sender is operable to adjust one or more bits a packet in the packet flow to indicate a presence and a classification of the pause. Client 191 provides indication of the pause through an external signal, which must be in the form of bits. The message frame and bit structure differ depending on what type of pause signal was sent. Refer to Column 7, lines 21-30.

Referring to claim 26, refer to the rejection of claims 1, 11 and 16. Furthermore, Chien et al disclose that the invention can be implemented in a computer readable medium including code for processing packets in a network, the code operable to perform the steps of claims 1, 11 and 16. Refer to Column 13, lines 20-36.

Allowable Subject Matter

5.   Claims 7, 8 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng
July 14, 2005
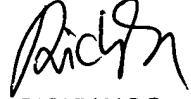
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